

### Amendments To The Claims.

1. (Currently Amended) A tap (10) adapted for formation of female screw-threads in a plurality of metal parts, each female screw-thread being capable of imparting translational motion to a threaded second member engaged therewith, the threaded second member having a matching male screw-thread and the translational motion occurring on relative rotation between the first metal part and the threaded second member, the tap (10) being fluteless and comprising a threaded portion (23) with a triangular form thread, ~~characterised in that~~ wherein the triangular form thread has an angle of thread ( $\alpha$ ) in the range  $29^\circ$  -  $40^\circ$  and radiussest crests (16).
2. (Currently Amended) A tap (10) as claimed in claim 1 wherein the angle of thread ( $\alpha$ ) is  $29^\circ$  to  $31^\circ$ .
3. (Currently Amended) A tap (10) as claimed in claim 2 wherein the angle of thread ( $\alpha$ ) is  $30^\circ$ .
4. (Currently Amended) A tap (10) as claimed in ~~any one of the preceding claims~~ claim 1 wherein the tap (10) has a chamfered ~~first~~ front end (12-15).
5. (Currently Amended) A tap (10) as claimed in claim 4 wherein the chamfered front end extends over at least four turns (12-15) of the thread.
6. (Currently Amended) A tap (10) as claimed in ~~claims 4 or 5~~ claim 4 wherein the chamfered front end (12-15) has a chamfer angle ( $\beta$ ) in the range  $5.5^\circ$  to  $6.5^\circ$ .
7. (Currently Amended) A tap (10) as claimed in ~~any one of claims 1 to 6~~ claim 1 which has at least two starts.

8. (Currently Amended) A tap (10) as claimed in ~~any one of the preceding claims~~ claim 1 wherein the radiussed crests (16) have a radius of curvature in the range of 0.165 to 0.175 mm.
9. (Currently Amended) A tap (10) as claimed in ~~any one of the preceding claims~~ claim 1 wherein the roots (17) of the threaded portion (23) of the tap (10) are radiussed.
10. (Currently Amended) A tap (10) as claimed in claim 9 when the radiussed roots (17) have a radius of curvature in the range 0.178 mm to 0.188 mm.
11. (Currently Amended) A tap (10) as claimed in ~~any one of the preceding claims~~ claim 1 wherein the thread has a pitch of 0.995 mm to 1.005 mm.
12. (Currently Amended) A tap (10) as claimed in ~~any one of the preceding claims~~ claim 1 comprising additionally lubrication grooves.
13. (Currently Amended) A tap (10) as claimed in ~~any one of the preceding claims~~ claim 1 comprising a shank portion (24) extending rearwardly from the threaded portion (23) and a rearmost portion (25) with a plurality of flat surfaces to enable engagement of the tap by a chuck.
14. (Currently Amended) A tap (10) as claimed in claim 13 in which at least one of the flat surfaces is precision machined in order to precisely set a distance between the front of the tap (10) and at least one end of the flat surface.
15. (Currently Amended) A product having a tapped bore with a female screw-thread formed using the tap (10) claimed in ~~any one of the preceding claims~~ claim 1.
16. (Currently Amended) A method of tapping a product in which a female screw thread is formed using a tap (10) as claimed in ~~any one of claims 1 to 14~~ claim 1.

17. (Currently Amended) A method of manufacture and use of apparatus which has a first metal object with a female screw-thread and a second metal object with a matching male screw-thread, the method comprising the steps of:

forming in the first metal object a female screw-thread using a tap (10) as claimed in ~~any one of claims 1 to 14~~ claim 1;

forming on at least a part of the second metal object a male screw-thread matching the female screw-thread of the first metal object;

engaging the male screw-thread of the second metal object with the female screw-thread of the first metal object, and

rotating one of the first and second metal objects relative to the other in order to occasion translational motion of the second metal object relative to the first metal object.

18. (New) A tap adapted for formation of female screw-threads in a plurality of metal parts, each female screw-thread being capable of imparting translational motion to a threaded second member engaged therewith, the threaded second member having a matching male screw-thread and the translational motion occurring on relative rotation between the first metal part and the threaded second member, the tap being fluteless and comprising a threaded portion with a triangular form thread, wherein the triangular form thread has an angle of thread in the range 29°- 40° and radiussed crests and the tap has a chamfered front end.

19. (New) A tap as claimed in claim 18 wherein the chamfered front end extends over at least four turns of the thread.

20. (New) A tap adapted for formation of female screw-threads in a plurality of metal parts, each female screw-thread being capable of imparting translational motion to a threaded second member engaged therewith, the threaded second member having a matching male screw-

thread and the translational motion occurring on relative rotation between the first metal part and the threaded second member, the tap being fluteless and comprising a threaded portion with a triangular form thread and at least two starts, wherein the triangular form thread has an angle of thread in the range 29°- 40° and radiussed crests.